#### (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

# (19) World Intellectual Property Organization International Bureau



# 

(43) International Publication Date 9 December 2004 (09.12.2004)

PCT

# (10) International Publication Number WO 2004/106941 A3

(51) International Patent Classification<sup>7</sup>: G01N 33/92, 33/50

(21) International Application Number:

PCT/EP2004/005786

(22) International Filing Date: 28 May 2004 (28.05.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

| 30 May 2003 (30.05.2003)  | US   |
|---------------------------|--|
| 30 May 2003 (30.05.2003)  | US   |
| 30 May 2003 (30.05.2003)  | US   |
| 30 June 2003 (30.06.2003) | US   |
|                           | 30 May 2003 (30.05.2003)<br>30 May 2003 (30.05.2003) |

- (71) Applicant (for all designated States except US): GENOVA LTD.; Canon's Court, 22 Victoria Street, Hamilton HM 12 (BM).
- (71) Applicant (for AT only): NOVARTIS PHARMA GMBH [AT/AT]; Brunner Strasse 59, 1230 Vienna (AT).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): BOUGUELERET, Lydie [FR/CH]; GeneProt, Inc., 2, Pré-de-la-Fontaine, CH-1217 Meyrin (CH).
- (74) Agent: GRUBB, Philip; Novartis AG, Corporate Intellectual Property, CH-4002 Basel (CH).

- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

#### Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) Date of publication of the international search report: 26 May 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.



Internal Application No
PCT/EP2004/005786

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 G01N33/92 G01N33/50

According to International Patent Classification (IPC) or to both national classification and IPC

#### B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols) IPC  $\,7\,$  GO1N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, BIOSIS, Sequence Search

| Category ° | Citation of document, with indication, where appropriate, of the relevant passages   | Relevant to daim No. |
|------------|--|----------------------|
| Y          | HIGAZI ABD AL-ROOF ET AL: "Defensin stimulates the binding of lipoprotein (a) to human vascular endothelial and smooth muscle cells" BLOOD, vol. 89, no. 12, 1997, pages 4290-4298, XP002299296 ISSN: 0006-4971 abstract page 4290, right-hand column, paragraph 2 | 1-16                 |
| Υ          | US 5 641 497 A (JONES DOUGLAS E ET AL) 24 June 1997 (1997-06-24) abstract; claim 38; sequence 5 -/   | 1–16                 |

| Further documents are listed in the continuation of box C.  | χ Patent family members are listed in annex.  |  |  |
|---|---|--|--|
| Special categories of cited documents:  "A" document defining the general state of the art which is not considered to be of particular relevance  "E" earlier document but published on or after the international filing date  "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)  "O" document referring to an oral disclosure, use, exhibition or other means  "P" document published prior to the international filing date but later than the priority date claimed | <ul> <li>"T" later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</li> <li>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</li> <li>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.</li> <li>"&amp;" document member of the same patent family</li> </ul> |  |  |
| Date of the actual completion of the international search  6 October 2004   | Date of mailing of the International search report  2 1. 03. 05   |  |  |
| Name and mailing address of the ISA  European Patent Office, P.B. 5818 Patentiaan 2  NL – 2280 HV Rijswijk  Tel. (+31–70) 340–2040, Tx. 31 651 epo nl,  Fax: (+31–70) 340–3016  | Authorized officer  Cuendet, P  |  |  |

Intermenal Application No
PCT/EP2004/005786

| n) DOCUMENTS CONSIDERED TO BE RELEVANT  |   |   |
|---|---|---|
| C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT  Category Citation of document, with indication, where appropriate, of the relevant passages  Relevant to claim No.  |   |   |
| tation of document, with indication, where appropriate, of the relevant passages  |   | Relevant to claim No.   |
| WO 01/30354 A (FISHER EDWARD A; UNIV JEFFERSON (US); WILLIAMS KEVIN JON (US)) 3 May 2001 (2001-05-03) abstract; claims 1,5,38   |   | 1–16  |
| TANG YI-QUAN ET AL: "Isolation, characterization, cDNA cloning, and antimicrobial properties of two distinct subfamilies of alpha-defensins from rhesus macaque leukocytes" INFECTION AND IMMUNITY, vol. 67, no. 11, November 1999 (1999-11), pages 6139-6144, XP002299297 ISSN: 0019-9567 abstract; figure 4 |   | 1-16  |
|   |   |   |
|   | WO 01/30354 A (FISHER EDWARD A; UNIV JEFFERSON (US); WILLIAMS KEVIN JON (US)) 3 May 2001 (2001-05-03) abstract; claims 1,5,38  TANG YI-QUAN ET AL: "Isolation, characterization, cDNA cloning, and antimicrobial properties of two distinct subfamilies of alpha-defensins from rhesus macaque leukocytes" INFECTION AND IMMUNITY, vol. 67, no. 11, November 1999 (1999-11), pages 6139-6144, XP002299297 ISSN: 0019-9567 | WO 01/30354 A (FISHER EDWARD A; UNIV JEFFERSON (US); WILLIAMS KEVIN JON (US)) 3 May 2001 (2001-05-03) abstract; claims 1,5,38  TANG YI-QUAN ET AL: "Isolation, characterization, cDNA cloning, and antimicrobial properties of two distinct subfamilies of alpha-defensins from rhesus macaque leukocytes" INFECTION AND IMMUNITY, vol. 67, no. 11, November 1999 (1999-11), pages 6139-6144, XP002299297 ISSN: 0019-9567 |



| Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)   |
|--|
| This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:   |
| Claims Nos.:     because they relate to subject matter not required to be searched by this Authority, namely:  |
| Claims Nos.:     because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically: |
| 3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).  |
| Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)   |
| This International Searching Authority found multiple inventions in this international application, as follows:  |
| see additional sheet   |
| As all required additional search fees were timely paid by the applicant, this international Search Report covers all searchable claims.   |
| 2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.  |
| 3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:                        |
| 4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the Invention first mentioned in the claims; it is covered by claims Nos.:  1-16      |
| Remark on Protest  The additional search fees were accompanied by the applicant's protest.  No protest accompanied the payment of additional search fees.  |

| Internal Application No |  |
|-------------------------|--|
| PCT/EP2004/005786       |  |

| Patent document cited in search report |   | Publication date |                            | Patent family<br>member(s)                                       | Publication date   |
|--|---|------------------|----------------------------|--|--|
| US 5641497                             | A | 24-06-1997       | AU<br>CA<br>EP<br>JP<br>WO | 4381493 A<br>2135194 A1<br>0650494 A1<br>7507213 T<br>9324513 A1 | 30-12-1993<br>09-12-1993<br>03-05-1995<br>10-08-1995<br>09-12-1993 |
| WO 0130354                             | A | 03-05-2001       | AU<br>WO<br>US             | 1350301 A<br>0130354 A1<br>2003170643 A1                         | 08-05-2001<br>03-05-2001<br>11-09-2003                             |